Conclusions: We conclude that transfusion of blood products is an integral part of stem cell transplantation. Role of growth factors and lowering the threshold of transfusion in an attempt to decrease the need of transfusion should be studied in a prospective fashion. Decreased survival in patients receiving more transfusion could be due to the nature and severity of underlying disease rather than an independent risk factor for survival.

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VACCINATION AGAINST INFECTION AFTER HAEMOPOIETIC STEM CELL TRANSPLANT: A SURVEY OF PRACTICE IN THE UK & IRELAND (BRITISH SOCIETY OF BONE MARROW TRANSPLANTATION)

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International guidelines recommend revaccination of haemopoietic stem cell transplant (HSCT) recipients. We surveyed practice in HSCT centres in the UK & Ireland. The response rate was 29/52 (56%): 9 did autologous (AUTO) transplants only & 20 performed allografts/autografts in adults &/or children (AUTO/ALLO). Responders represented 58% of recorded transplants (2003-2005).

Vaccination post-autologous HSCT was intended by 4/9 AUTO centres and 12/20 AUTO/ALLO centres. Vaccinations post-autograft were given by centres as follows: Combined/selective Diphtheria, Tetanus & Pertussis (DTP) (38%), Haemophilus B (HiB) (45%) , Meningococcus C (MC) (34%), Poliomyelitis (Polio) (31%, Salk), Hepatitis A (HA) (3%), Influenza A (Flu A) (45%) and Streptococcus pneumoniae (SP) (45%). Selected patients were routinely vaccinated against Measles / Mumps / Rubella (MMR) (28% centres) and Hepatitis B (HB) (10%). Antibody titres or CD4 cell counts guided timing of post-autologous HSCT vaccination in 4 & 1 centre respectively.

Vaccinations post-allograft were planned by centres as follows: DTP (100%), HiB (90%), MC (80%), Polio (95%, Salk), Flu A (100%) and SP (95%). Selected patients were routinely vaccinated against HB (25%) and HA (10%). CD4 cell counts guided timing of post-allograft vaccination in 2 centres.

Live vaccines were avoided by 4 ALLO/AUTO centres: MMR was given at 18-30 months post allograft in the rest provided there was no active Graft versus Host Disease or ongoing Immunosuppressive medication (I/S) . Bacillus Calmette Guerin was considered by 1 centre for high risk patients without GVHD or I/S.

Household contacts were advised to consider vaccination against Flu A in 17% centres while Salk polio vaccine was advised by 10% centres.

Penicillin V prophylaxis against SP was recommended by 6 centres post Autograft for 6-12 months or life if Total Body Irradiation had been given. Lifelong penicillin was advocated for all allografted patients by 9 centres and in selected patients by 3 centres. Episodes of severe Pneumococccal sepsis was reported by 24% centres independent of prior vaccination or penicillin.

Reasons for large variation, particularly among autologous HSCT recipients, may include lack of Grade A evidence, perceived poor efficacy and patient non-compliance. Systematic multicentre prospective evaluation of immune-reconstitution and incidence of specific infections may clarify the value of post SCT vaccination in prevention of life threatening infection.

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PROPHYLACTIC RED BLOOD CELL EXCHANGE FOR PREVENTION OF SEVERE HEMOLYSIS AFTER MINOR ABO-INCOMPATIBLE STEM CELL TRANSPLANTATION FOLLOWING REDUCED-INTENSITY CONDITIONING

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Background: In about 20% of allogeneic stem cell transplantation (SCT) minor ABO incompatibility does exist. This is accompanied with the risk of severe hemolysis especially during hematopoietic regeneration. The risk of hemolysis increases if peripheral blood stem cells are used instead of bone marrow (BM) and a graft-versus-host disease (GvHD) prophylaxis without methotrexate (MTX). As we have observed lethal hemolyses in patients undergoing minor ABO mismatched SCT following reduced intensity conditioning (RIC) we decided to perform prophylactic red blood cell exchange (RBCX) in all consecutive patients undergoing RIC prior to SCT with a minor ABO incompatible donor.

Materials and Methods: From April 1999 to March 2006, 112 consecutive patients underwent SCT with a sibling (n=55) or unrelated donor graft (n=57) after RIC. GvHD prophylaxis consisted of CyA and mycophenolate mofetil (MMF). Fifty-four patients had an ABO-identical donor, 33 received an ABO-minor/bidirectional and 25 an ABO-major incompatible graft, respectively. RBCX was performed between day -5 and -1, removing 1 time patients RBC mass to reduce his remaining RBCs to about 40%. Packed RBCS of group 0 were used as exchange fluid.

Results: So far, 20 patients underwent prophylactic RBCX before SCT. The procedure was tolerated well in 16 (80%) patients, 2 developed citrate toxicity and 2 nausea and hypotension during treatment leading to discontinuation of RBCX in the latter patients. Whereas 18 patients did not experience any signs of hemolysis after minor ABO incompatible SCT, 2 showed a marked increase in lactic dehydrogenase and serum bilirubin levels without a drop of hematocrit levels below 28% during hematologic recovery. Six of 20 patients with prophylactic RBCX died between 4.3 and 29.2 months after SCT of GvHD and infection (n=3), invasive aspergillosis (n=1) and relapse of hematologic disease (n=2). One patient rejected his graft within 1 month. The other 13 (64%) patients are in continuous complete remission a median of 13.9 months (1.2 to 36) after SCT.

Conclusion: RBCX is a save and well tolerated procedure to prevent severe hemolysis by elimination of the majority of incompatible recipient RBCs as demonstrated by our data. Whether a more intensive immunosuppression can overcome the risk of hemolysis without affecting the establishment of donor chimerism remains unclear. Nevertheless, close monitoring of patients at risk between days 5 and 15 after SCT is recommended.

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AN EVALUATION OF INFECTIONS AND RESISTANCE PATTERNS AFTER IMPLEMENTATION OF ANTIBIOTIC PROPHYLAXIS IN NEUTROPENIC CANCER PATIENTS

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Two recently published trials and a meta-analysis reported significantly reduced febrile episodes and mortality, respectively, with the use of FQ prophylaxis in neutropenic cancer patients. Although this data supports the use of antibiotic prophylaxis (AP), AP does not come without risks. A concern exists for breakthrough infections with multidrug resistant (MDR) organisms and colonization with resistant bacteria. Our institution initiated the use of AP to prevent febrile neutropenia (FN) in high risk cancer patients after the reports above, and assessed the efficacy of AP in our patients and the incidence of MDR infection and colonization in neutropenic cancer patients prior to and after the implementation of AP.

Patients at high risk for FN (hematopoietic stem cell transplant, leukemia patients undergoing induction or consolidation chemotherapy, patients with a history of previous FN or undergoing a chemotherapy regimen with an expected duration of neutropenia > 10 days) were given AP (moxifloxacin 400 mg daily) initiated the day after chemotherapy and continued until neutropenia resolved or breakthrough fever requiring broad spectrum antibiotics occurred.

Preliminary analysis of 81 patients showed that 38 patients (47%) developed FN with a mean time to febrile episode of 10.9 days. Eighteen patients were readmitted for FN, in 19 patients FN occurred during the same hospitalization, and one patient was treated as an outpatient with IV antibiotics. Seventeen (21%) patients had positive cultures: blood (6), urine (9), sputum (2). The rate of overall microbiologically documented infection (21%) is similar, but the rate of bacteremia (7%) lower than those reported in a similar risk patient group using levofloxacin AP (18%) (NEJM, 2005;335:977). Evalua-